

Technical Training Competency 1.11

Competency 1.11 Technical training personnel shall demonstrate a working level knowledge of the evaluation phase of the Systematic Approach to Training process.

1. Supporting Knowledge and Skills

- a. Describe the major activities that take place during the evaluation phase, including a discussion of the four levels of evaluation.
- b. List the indicators of training system/program performance and changing training needs that should be monitored.
- c. Describe the content and structure of evaluation instruments (forms) used to collect evaluation data at each of the four levels.
- d. Describe the process by which information collected during the evaluation phase is analyzed.
- e. Describe how training courses and/or programs may be modified based upon the results of each of the four levels of evaluation.

2. Self-Study Activities (corresponding to the intent of the above competency)

Below are two web sites containing many of the references you may need.

Web Sites		
Organization	Site Location	Notes
Department of Energy	http://wastenot.inel.gov/cted/stdguido.html	DOE Standards, Guides, and Orders
U.S. House of Representatives	http://law.house.gov/cfr.htm	Searchable Code of Federal Regulations

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Read Section 1, pages 1 through 3, of DOE-STD-1006-92, U.S. Department of Energy Guideline, *Guide to Good Practices: Evaluation Instrument Examples*; Section 6, pages 53 through 63, of DOE-HDBK-1078-94, U.S. Department of Energy Handbook, *Training Program Handbook: A Systematic Approach to Training*; pages 5-1 through 5-3 of *The Occasional Trainer's Handbook*; Sections 2.7, pages 6 through 8, 3.4, pages 14 through 15, and 5.11, pages 28 through 29, of DOE-STD-1056-93, U.S. Department of Energy Standard, *Guide to Good Practices for Line and Training Manager Activities Related to Training*; and paragraph 5, pages 7 through 12, of DOE-STD-1070-94, U.S. Department of Energy Standard, *Guideline for Evaluation of Nuclear Facility Training Programs*.

EXERCISE 1.11-A What is the purpose of the evaluation phase?

EXERCISE 1.11-B What role does the facility manager have in the evaluation phase?

EXERCISE 1.11-C What major activities occur during the evaluation phase?

EXERCISE 1.11-D What are some training performance indicators that would be useful to a facility manager?

Read Sections 2 and 3, pages 5 through 11, of DOE-STD-1006-92, U.S. Department of Energy Guideline, *Guide to Good Practices: Evaluation Instrument Examples*; Section 5.6, pages 23 through 24, of DOE-STD-1056-93, U.S. Department of Energy Standard, *Guide to Good Practices for Line and Training Manager Activities Related to Training*; and Section 6, pages 53 through 63, of DOE-HDBK-1078-94, U.S. Department of Energy Handbook, *Training Program Handbook: A Systematic Approach to Training*.

EXERCISE 1.11-E List three types of post-training feedback; for example, instructor performance.

EXERCISE 1.11-F Review the example evaluation data collection forms contained in Appendices A through C of DOE-STD-1006-92.

EXERCISE 1.11-G What happens to the data collected during the evaluation phase?

EXERCISE 1.11-H List three types of changes to a defense nuclear facility that would likely have an impact on training programs and materials; for example, procedure changes.

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3. Summary

Evaluations of training programs are conducted to provide reasonable assurance that programs are producing competent employees who are capable of performing their jobs safely and efficiently. This assurance benefits DOE through increased productivity, increased worker and facility safety, and decreased costs of operation. Training and qualification programs require a significant investment in equipment, materials, and personnel resources. Evaluations of a training program's effectiveness in producing competent employees are conducted to ensure that training is being conducted in a consistent, cost-effective, and efficient manner. Additionally, training program evaluations determine program strengths and weaknesses, whether worker performance has improved, whether program content matches current job needs, and whether corrective actions are needed to improve program effectiveness.

4. Exercise Solutions

EXERCISE 1.11-A What is the purpose of the evaluation phase?

- ANSWER 1.11-A
- To determine if a program is accomplishing its objectives
 - To identify the strengths and weaknesses of a training program
 - To identify which trainees benefitted the most or the least from a training program
 - To determine if a program was appropriate for its intended purpose and target population

EXERCISE 1.11-B What role does the facility manager have in the evaluation phase?

- ANSWER 1.11-B
- Observe and evaluate training sessions
 - Participate in the overall evaluation or assessment of the effectiveness of the training programs and training department activities

EXERCISE 1.11-C What are the major activities occurring during the evaluation phase?

- ANSWER 1.11-C
- Monitor indicators (e.g., facility experiences, events, changes, employee and supervisor feedback, inspection and evaluation reports, regulatory issues, etc.)
 - Analyze the data
 - Initiate corrective actions

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EXERCISE 1.11-D What are some training performance indicators that would be useful to a facility manager?

ANSWER 1.11-D The following are example indicators:

- Reductions in personnel errors
- Timely feedback from line management for improving training
- Timely incorporation of line management and trainee feedback into the training
- Trainee examination scores and pass-fail rates

EXERCISE 1.11-E List three types of post-training feedback; for example, an assessment of the instructor's performance.

- ANSWER 1.11-E
- Instructor's assessment of the training session
 - Supervisor's feedback
 - Trainee feedback
 - Assessment of the effectiveness of the training materials, methods, and media

EXERCISE 1.11-F Review the example evaluation data collection forms contained in Appendices A through C of DOE-STD-1006-92.

ANSWER 1.11-F None required.

EXERCISE 1.11-G What happens to the evaluation data collected during the evaluation phase?

- ANSWER 1.11-G
1. The data are analyzed using, for example, one of the following:
 - Frequency distributions
 - Exception analysis
 - Content analysis
 - Root cause identification
 2. Corrective actions are taken based on the results of the data analysis.

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EXERCISE 1.11-H List three types of changes to a defense nuclear facility that would likely have an impact on training programs and materials; for example, procedure changes.

ANSWER 1.11-H Any three of the following: facility modifications; design changes; changes to controlled drawings, safety analyses, or technical specifications; facility events; industry events.